

PROJECTED WORKS.—Advertisements have been issued for tenders, by 21st inst., for the erection of the Worcester National Schools; by 17th, for building the new Unitarian Chapel, at Banbury; by 11th, for the erection of the new church of St. Peter, at Croydon; by 23rd, for the construction of the drainage and water supply, and other sanitary works, at the workhouse premises, Amersham, Bucks; by 24th, for the erection of Harlow new schools; without delay, for the execution of the works of Sketty new church (Swansea); by 14th, for the erection of a school house and master's residence at Abergwesin (Hersford); by 10th, for the erection of the Welsh Educational Institution at Llandovery; by 9th, for the erection of the Literary and Scientific Institute, Town-hall, and County-court, at Stonehouse (Devon); by 6th August, for the execution of contract No. 1 of the London-bridge station enlargement, comprising sub-structure of new station, ballast, permanent way, &c.; by 10th inst., for the erection and completion of a goods shed at Mirfield station of Lancashire and Yorkshire Railway, and by 17th, for passenger-station at Bradford, on same line; by 20th, for making new line of road in parish of Leigh (Worcester); by 7th, for bricklayers', joiners', stone-masons', slaters', plumbers', and painters' works in repairing buildings for Trinity House; by 11th, for repairing public conduits and water-works at Southampton; by 9th, for construction of service reservoir for Sunderland Water-works; by 18th, for fitting up large gas-holder at Paisley; and by 11th, for the several works in building St. Matthias's Church, Bristol.

THE POSITION OF RAILWAYS.—Mr. A. Gordon, C.E., has recently republished his past anticipations of the present state of things, from which it does appear that since the outset of the railway system he has repeatedly warned the public of the false principles on which its direction and conduction were being carried on. As to recent disclosures, he estimates that even admitting the railway capital at large (200,000,000*l.*) to be now depreciated, so as to be only 100,000,000*l.*, "the grand railway account would not show quite 1 per cent. per annum from which to pay dividends." And "still," he adds, "there is no provision made for replacement of capital." The high-blown bladder, which he appears to regard as still poised on high in full inflation, "must ere long burst," he believes; and, accordingly, he once more warns all and sundry not yet shareholders, "that pending the requisite remedial measure, the owners and representatives of the two hundred millions are not term-tied partners, but fluctuating shareholders, whose best chance of escaping from the dilemma is by keeping up the apparent value of the shares till some other parties take their places."

TANN'S RELIANCE DETECTOR LOCK.—In this, which is a lever detector lock, a new feature has been introduced, namely, the protecting one or more of the levers by a guard. The guard is placed on one of the levers, and protects the lever either above or below it, so that even if a false key or pick succeeded in lifting to the proper height all the levers with unprotected fronts, it could not raise the one behind the guard, and the slightest extra lift of the guarded lever at once fixes the detector, and then the proper key only can regulate it. The addition seems to give much increased security.

THE MARBLE ARCH.—We have no faith in the statement of some of our contemporaries that the marble arch is going to Windsor. One correspondent puts before us the suggestion made in the *Athenæum*, that it should be erected in front of the British Museum. We incline much more strongly to the suggestion in our own pages (among twenty others), that it should be made to form a fitting entrance to St. James's-park at Spring-gardens, where such is much needed.

BRITANNIA AND CONWAY TUBULAR BRIDGES.—At this moment, our readers may be glad to know of the publication of a brief description of these bridges.* Of a more important work on the same subject, by Mr. Fairbairn, just now issued,† maintaining the right of Mr. Fairbairn to a share of the public applause, we shall take an opportunity to speak.

* Chapman and Hall, Strand.

† Wmle.

ELECTRO-TELEGRAPHIC PROGRESS.—The *modus operandi* of the copying telegraph has at length been revealed. According to the specification of the patent, two cylinders are made to revolve by clockwork, regulated by an electro-magnet four times in each revolution, so as to be perfectly coincident in time of rotation. On one is rolled a sheet of tin foil, and on the other a sheet of paper saturated with a solution which electricity will easily decompose and blacken through a metallic pointer, which presses on it and conducts the current to the paper after it passes from the tin foil on the other cylinder, through a similar metallic pointer pressing on it. The apparatus thus prepared, and the cylinders made to revolve, with the electricity in action,—the pointers are carried gradually from one end of the cylinders to the other, so that a spiral series of dark lines, closely continuous, is described on the paper from end to end, unless the current of electricity be interrupted, which it is by means of writing, or other characters or forms, on the conducting tinfoil round the other cylinder, traced with a nonconducting varnish in place of ink. It is thus manifest that an exact copy of the tracing will be picked out as it were by blank intervals in the black or blue lined spiral tracery on the papered cylinder, the pointer ceasing to blacken the paper wherever its fellow passes over or across the varnish on the tinfoil; and thus, by a contrivance of the most ingenious and simple description, accomplishing one of the most astonishing miracles of this age of wonders. With a single wire, 400 letters per minute can thus be transmitted. And the wonder does not end here, for the message or letter transmitted by correspondents (to their own paper and from their own tinfoil, of course, if desired), with its signature, &c., is a perfect fac-simile of the original in form or tracery, only written, as it were, in white ink, on a dark ground like line engraving. Drawings, it is clear, too, or even portraits, plans, &c., may as readily be thus not only copied, but transmitted hundreds of miles at one and the same moment. The name of the inventor of this triumph of genius is Blake-well. The specification of the patent includes improvements in opening and closing communication with different stations by means of one wire, and points to the establishment of a system of half-hourly dispatches. The facilitation and cheapening of newspaper reports too by such means are very obvious, especially as shorthand can thus be still more readily and rapidly copied than ordinary writing.

GUTTA PERCHA TUBING.—A series of experiments have just been concluded at the Birmingham Water-Works, relative to the strength of gutta percha tubing, with a view to its applicability for the conveyance of water. The experiments were made under the direction of Mr. Henry Rofe, engineer, upon tubes of three quarters of an inch diameter and one-eighth thick of gutta percha. These were attached to the iron main and subjected for two months to a pressure of 200 feet head of water, without, as we are told, being in the slightest degree deteriorated. In order to ascertain, if possible, the maximum strength, one of the tubes was connected with the Water Company's hydraulic proofing pump, the regular load of which is 250 lbs. on the square inch. At this point the tube was unaffected, and the pump was worked up to 337 lbs., but, as we are informed, it still remained perfect.

FOLEY'S "INO AND INFANT BACCHUS."—In the Court of Queen's Bench on 29th ult., Lord Charles Townsend sought to recover from Mr. Foley 250*l.* had and received to form a group in marble on the model exhibited at Westminster Hall as "Ino and the Infant Bacchus," to be executed for 550 guineas. His lordship, however, during its progress, regretted he had not commissioned a single figure, and ultimately, on an understanding with Mr. Foley's brother, claimed the "refusal" of the group. Mr. Foley thereupon sold it to Lord Ellesmere for 750 guineas, and Lord Townsend applied for a return of the 250*l.* advanced. The defendant urged the usual practice of bargains with sculptors in cases where the result of their commissioned labour was rejected, namely, payment of one-half the price in advance and no repayment, leaving, in this case, 38*l.* 15*s.* due to the defendant, who, however, had offered to refer the matter in dispute to Sir Robert Peel or other

competent arbitrator. Lord Denman recommended Lord Townsend to commission a single figure,—a proposal at once acceded to by both parties. After withdrawing a juror and entering a nonsuit, with costs to neither, Lord Denman decided, as requested, that the value be fixed by an arbiter, mutually agreed on, either party paying the difference to the other, if above or below 200*l.*

CHESTER.—Curiosity has been awakened by some archaeological discoveries in Common-hall-street, Chester. The workmen engaged in excavating for the public sewers first came across a footpath with curb stones set on edge at a depth of 7 feet, and afterwards laid bare what appeared to be the foundations of a row of columns three or four yards apart, set on a strong bed of concrete, 10 feet below the level of the present street. On the fourth of these foundations there still remained the base of a column. Many fragments of Roman bricks and tiles, with Latin letters on them, were found at the same depth. They have crossed, also, another of those mysterious passages in Common-hall-street, about 5 feet by 5 feet, cut out of the rock 11 feet 6 inches below the surface, but whether it has been used as a subterranean passage, or for the more ignoble purposes of a drain, there seems to be a difference of opinion. The borough engineer is using every exertion to collect and preserve these antiquities. As we hope to be present at the meeting of the British Archaeological Association, to be held here at the end of the month, we may have something more to say of this hereafter.

THE SHANNON IMPROVEMENT WORKS.—On Monday from 600 to 700 men were placed upon the works, which consist in deepening the bed of the river, and clearing away the remains of the ancient bridge which formerly connected the provinces of Leinster and Connaught. A good deal of disappointment was felt by those who had been rejected, many of the starving creatures having travelled a long distance with the hope of being engaged. Yesterday and to-day the number of hands has been considerably increased, and now upwards of 1,500 men find employment on these works. *Athlone-Independent.*

WALL PAINTINGS, CULLOMPTON CHURCH.—The walls of Cullompton Church, Devon, now being restored, are found, upon partially scraping off the white lining, to be covered interiorly with paintings in distemper. In the north aisle is a figure of St. Christopher, 9 feet high, with fishes and a mermaid at his feet, and his green twisted palm staff; other figures on an equally gigantic scale are sadly cut up by marble monuments; one of these is St. Michael weighing departed spirits: a demoniacal horned head is grinning between the cords of the lighter scale. There is another figure with a sort of pontifical crown, and bearing a wand, cruciform at its termination. On the north side of the nave clerestory is St. Clara in an orange-coloured robe, with a mitre terminated by a ball: her name is on a ribbon beneath. There are other specimens of the colourist's art in foliage adapted to spandrels, which, as well as the dresses of the figures, also the mouldings of the pier arches, are chiefly of an Indian red colour. It is a matter of regret to many that our antiquaries do not unveil more of these figures and their inscriptions before the decayed plastering is renewed, which it necessarily must be very shortly.

E. ASHWORTH.

TENDERS.

For building new farm house, and rebuilding farmyard at Arisey, Beds, for Mr. S. B. Edwards; Mr. Goddard, architect:—

Betts and Warren, Stevenage	£3,030
Patrik, London	2,970
Cobb, Bedford	2,500
Francis and Bryant, ditto	2,400
Newton, Hitchin	2,350
Barford and Jackson	2,190

For erecting a new church at Shewen, near Neath, stated to be an enlarged copy of the Roman Catholic Church erected in Swansea a few years since, in the Early English style:—

Hughes and Davies	£1,657
Powell	900
Townsend	787

The tenders for the Catholic Church, 10 feet less in length and 3 feet in width, were:—

Jones	£1,470
Pilditch	1,350
Morris	1,300
Strawbridge	1,100
Rayner	1,054
Taylor (accepted)	1,040
Prater and Dyer	885